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EXAMINER	
WANG, JIN CHENG	
ART UNIT	PAPER NUMBER

2672

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Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/631,413

Applicant(s)

BERTHAUD, CHRISTOPHE

Examiner

Jin-Cheng Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Response to Amendment***

The preliminary amendment filed on 02/06/2003 has been entered. Claims 1-18 have been amended.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Olsen U.S. Patent No. 6,137,479.

3. Claim 1:

*A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors whose respective sensitive pads are supported at least partially by said outer element.*

The Olsen reference has taught a mouse watch 54 including display means for at least one item of time related data and having an at least partially transparent outer element covering the display means (figures 4-7, column 5, lines 65-67, column 6, lines 1-67, and column 7, lines 1-25). The Olsen reference has taught a mouse watch including control means for controlling the movement of cursor on a computer screen and touch sensitive sensors are built into the mouse watch to provide the computer mouse functions, i.e., the mouse watch can be used to detect the cursor movement on the display screen 26 (see for example, column 5, lines 42-67, and column 6, lines 1-67, column 7, lines 1-25).

- The Examiner interprets “the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element” as the sensitive pads of the touch sensitive sensors having at least partial contact with the outer element. In column 6, lines 35-67 and column 7, lines 1-25, it is stated “the programmable computer housing 90 contains the programmable computer components (e.g., the programmable computer 86)...the programmable computer 86 has a display 104...the computer mouse housing 88 has a saddle 92 for coupling the programmable computer 86 to the computer mouse 84...the programmable computer housing 90 makes physical contact with the computer mouse housing 88.” See also figures 6 and 7. Therefore, Olsen teaches that the outer element (i.e., the programmable computer housing 90) covers the display means (i.e., display 104) or forms an outer portion (i.e., the programmable computer housing 90 of figure 7) of these display means (i.e., display 104), and the sensitive pads of the touch sensitive sensors (i.e., motion sensor 104) are supported at least partially by the outer element (i.e.,

the programmable computer housing 90). As applied to the present application, Olsen fulfills the claimed limitation that the outer element covers the display means or forms an outer portion of these display means, and the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element.

- The Examiner notes that in column 5, lines 65-67 and column 6, lines 1-13 of Olsen, it is stated “the basic operation and construction of conventional motion sensors are well known and widely used in the computer pointing device art and accordingly, these aspects of the present invention will not be discussed further”. Olsen teaches a pressure sensor (or a motion sensor in another embodiment) and a pressure sensor may be constructed by a plurality or an array of (compactly made) sensors in his mouse watch device and therefore Olsen has inherently taught a plurality of sensors in his mouse watch device. Moreover, a pressure sensor (or a motion sensor) that is utilized in a point device acts like a plurality of sensors in functionality. A cursor device such as Olsen may embed a two or three axis pressure sensor in a button conformed to a finger, depending on the type of sensors are used, a pair of which may be used to provide information about two axes of displacement through which the location of an on-screen cursor or pointer is controllable. According to Olsen’s teaching, the mouse watch device of Olsen may comprise a relatively high-resolution array of pressure sensors, small switches, or the like.

In column 7, lines 34-49 of Olsen, it is stated “various motions sensors, displays and data transmission techniques may be used...” Therefore, the pressure- or motion-sensitive pointing device 54 may be implemented as having a two-dimensional array of

pressure/motion sensors, with each sensor corresponding to a coordinate position on a display screen wherein a finger is dragged across the array of sensors, and the direction of movement of the finger moves a pointer on the display screen in that direction and a button selector is pressed to select an object being pointed to by the pointer or to move a cursor displayed on the display screen to the location of the pointer or a pressure-sensitive selector located below the two-dimensional array of pressure sensors may be used, wherein the pressure-sensitive selector is activated when it is tapped at a pressure above a predetermined value greater than the pressure sensed by the two-dimensional array of pressure sensors. As applied to the present application, Olsen fulfills the claimed limitation that the first control means are formed of a plurality of touch sensitive sensors.

Claim 2:

Claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of "a watch crystal." The Olsen reference has taught an outer element such as the cover for the watch (see figures 4-7, column 6, lines 35-67 and column 7, lines 1-25). Furthermore, any conventional watch would require a cover to protect it from scratches, and the cover could be made from various materials including crystal as an outer element taught by Olsen in figures 4-5.

Claim 3:

Claim 3 recites all the limitations of claim 1 or 2 and adds the limitation of "first means is supported by the outer element." The Olsen reference has taught that the first means is supported

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by the outer element, i.e., the cover or surface for the watch as shown in figures 4-7 (column 6, lines 1-67 and column 7, lines 1-25).

Claim 4:

Claim 4 recites all the limitations of claim 1 or 2 and adds the limitation of “a part of sensitive pads is arranged in the top portion of the case.” The Olsen reference has taught in figures 4-7 a cover of watch that protects sensors from scratches (column 6, lines 1-67 and column 7, lines 1-25).

Claim 5:

Claim 5 recites all the limitations of claim 1 and adds the limitation of “sensitive pads arranged in the shape of a matrix.” The Olsen reference has taught a watch with multiple sensors arranged to generate signals to control the position of the cursor on the display screen (column 6, lines 1-67 and column 7, lines 1-25). The Examiner interprets that an array of multiple sensors can be arranged in the shape of matrix.

Claim 8:

Claim 8 recites all the limitations of claim 5 and adds the limitation of “the movement of cursor corresponds to the path taken by the user’s finger.” The Olsen reference teaches in figures 4-7 the surface area of the watch to generate signals to control the position of the cursor on the display screen (column 6, lines 1-13). Since the user’s finger can move upon the watch’s surface area, the path taken by the user’s finger corresponds to the cursor’s movement across a display screen.

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4. Claim 11 recites all the limitations of claim 1 and adds the limitation of “second control means.” The Olsen reference has taught a second control means such as a trackball being incorporated into the mouse watch device (column 8, lines 58-59).

Claim 12 recites all the limitations of claim 11 and adds the limitation of “the second control means arranged in the top portion of case.” The Olsen reference has taught the second control means are arranged in the top portion of the watch (figures 4-7, column 8, lines 58-59).

Claim 13 recites all the limitations of claim 11 and adds the limitation of “the second control means formed by touch sensitive sensor.” The Olsen reference has taught a second control means such as a trackball rotated to move the cursor on the display screen are formed by touch sensitive sensor (column 6, lines 1-67, column 7, lines 1-25, column 8, lines 58-59).

Claim 14 recites all the limitations of claim 11 and adds the limitation of “second control means arranged in a link of the wristband of the watch.” The Olsen reference clearly teaches a second control means arranged in a link of the wristband of the watch (column 6, lines 1-67, column 7, lines 1-25, column 8, lines 58-59).

Claim 15 recites all the limitations of claim 11 and adds the limitation of “second control means formed by a push-button.” The Olsen reference has taught a second control means such as keys 64 that are formed by a push-button (column 6, lines 1-67, column 7, lines 1-25, and column 8, lines 58-59).

Claim 16 recites all the limitations of claim 11 and adds the limitation of “second control means formed by a pressure sensor.” The Olsen reference has taught a second control means such as a trackball formed by a pressure sensor (column 6, lines 1-67, column 7, lines 1-25, and column 8, lines 58-59).



*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. U.S. Patent No. 6,137,479 in view of Teres et al U.S. Patent No. 6,184,871.

Claim 6 recites all the limitations of claim 5 and adds the limitation of “means for detecting the actuation frequency of successive sensors.” The Olsen reference teaches in figures 4-5 a watch 54 as a pointing device having a display and controls like a conventional watch and a person wears it like a conventional watch. Sensors are built into the watch to provide the computer mouse functions. However, Olsen is silent on means for detecting the actuation frequency of successive sensors.

The Teres reference teaches a watch with means for detecting the activated sensor representing the greatest variation of electrical quantity comprising conversion means of the total capacity of the set of the fixed capacitor and the parasite capacitor of each capacitive sensor A to S into an output signal having a frequency proportional to this total capacity (column 3, lines 24-37).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the means for detecting the actuation frequency of successive sensors of Teres’s watch device in the watch device of Olsen to generate signals for

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the control of a cursor on a display screen in accordance to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to considerably simplify the process of identifying a manual action on a surface formed by a finger.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. U.S. Patent No. 6,137,479, in view of Teres U.S. Patent No. 6,184,871, and further in view of Ferrari et al U.S. Patent No. 6,392,636.

Claim 7 recites all the limitations of claim 6 and adds the limitation of "the ratio between the movement of cursor and the path." Olsen in view of Teres teaches all the limitations of claim 6. However, the references are silent on the additional limitation as recited in claim 7.

Ferrari teaches a portable device having a display screen by providing an electrical output signal for selectively controlling movement of a cursor across the display screen. Ferrari further teaches capacitive sensing cells arranged in a row/column array top to produce output signals for control of cursor movement in both a row direction and an orthogonal column direction. Ferrari also teaches the horizontal and vertical direction such as the two X and Y array outputs being proportional to the zero and first moment of the 2-D pattern (column 11, lines 32-41 of the Ferrari reference). Therefore, Ferrari has taught that ratio between the movement of cursor and the path taken by a user's finger across an outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the additional means of cursor movement of Ferrari in the watch device of Olsen in view of Teres to control a cursor on a display screen in accordance

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to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to provide a more sensitive or high precision control to the cursor movement across a display screen.

8. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. U.S. Patent No. 6,137,479 in view of Teres U.S. Patent No. 6,184,871.

Claims 9-10 recites all the limitations of claim 1 and adds the limitation of "concentric zones." Olsen discloses a mouse watch with cursor movements as claimed. See figures 4-5 and respective portions of the specification. However, it is silent on the concentric zones, although the mouse watch could have made of an array of sensors forming concentric zones.

Teres et al. teaches a wristwatch device having concentric zones as shown in figure 3.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated an array of sensors forming the concentric zones as taught by Teres in the wristwatch device of Olsen to control a cursor on a display screen relative to the mid-position on the top surface of the watch's display. One having the ordinary skill in the art would have been motivated to do this to provide two different touch-sensitive zones for high precision cursor control.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. U.S. Patent No. 6,137,479.

Claim 17 recites all the limitations of claim 16 and adds the limitation of "pressure sensor formed by a piezoelectric crystal." Olsen discloses a mouse watch as claimed. See figures 4-5

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and respective portions of the specification. However, it is silent on “pressure sensor formed by piezoelectric crystal”.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated a piezoelectric crystal in the pressure sensors of Olsen since any conventional watch would require a cover to protect it from scratches, and the cover could be made from various materials including a piezoelectric crystal as an outer element taught by Olsen in figure 4.

One having the ordinary skill in the art would have been motivated to do this to provide reasonable light and/or semi-transparent material such as a piezoelectric crystal as the cover of the watch for the protection of the sensors inside the portable watch device.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. U.S. Patent No. 6,137,479, in view of Teres et al U.S. Patent No. 6,184,871.

Claim 18 recites all the limitations of claim 11 and adds the limitation of “second control means formed by micro-contactor or small travel contactor.” Olsen discloses a mouse watch as claimed. See figures 4-5 and respective portions of the specification. However, it is silent on “second control means formed by micro-contactor or small travel contactor.”

The Teres reference teaches a second control means such as push buttons or any other new control devices that may be replaced by other sensors (column 5, lines 4-16).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated second control means formed by other sensors such as a micro-contactor or small travel contactor of Teres in the portable watch device of Olsen

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because the construction of minuet sensors formed by micro-contactor or small travel contactor are well known and widely used in the computer pointing device art. One having the ordinary skill in the art would have been motivated to do this to provide additional control means for the portable watch device.

*Remarks*

11. Applicant's arguments, filed 02/06/2003, paper number 5, have been fully considered but they are not deemed to be persuasive.

12. Applicant argues in essence with respect to claim 1 and similar claims that:

"In figure 4c of Olsen a single pressure sensor 72 is disclosed. These embodiments are clearly irrelevant in view of the claimed subject matter, which mentions that 'the first control means are formed of a plurality of touch sensitive sensors...'"

This is not found persuasive for the following reasons:

- The Examiner notes that in column 5, lines 65-67 and column 6, lines 1-13 of Olsen, it is stated "the basic operation and construction of conventional motion sensors are well known and widely used in the computer pointing device art and accordingly, these aspects of the present invention will not be discussed further". Olsen teaches a pressure sensor (or a motion sensor in another embodiment) and a pressure sensor may be constructed by a plurality or an array of (compactly made) sensors in his mouse watch device and therefore Olsen has inherently taught a plurality of sensors in his mouse watch device. Moreover, a pressure sensor (or a motion sensor) that is utilized in a point device acts like a plurality of sensors in functionality. A cursor device such as Olsen may embed

a two or three axis pressure sensor in a button conformed to a finger, a pair of which may be used to provide information about two axes of displacement through which the location of an on-screen cursor or pointer is controllable. The mouse watch device of Olsen may consist of a relatively high-resolution array of pressure sensors, small switches, or the like.

In column 7, lines 34-49 of Olsen, it is stated "Various motions sensors, displays and data transmission techniques may be used..." Therefore, the pressure- or motion-sensitive pointing device 54 may be implemented as having a two-dimensional array of pressure/motion sensors, with each sensor corresponding to a coordinate position on a display screen wherein a finger is dragged across the array of sensors, and the direction of movement of the finger moves a pointer on the display screen in that direction and a button selector is pressed to select an object being pointed to by the pointer or to move a cursor displayed on the display screen to the location of the pointer or a pressure-sensitive selector located below the two-dimensional array of pressure sensors may be used, wherein the pressure-sensitive selector is activated when it is tapped at a pressure above a predetermined value greater than the pressure sensed by the two-dimensional array of pressure sensors. As applied to the present application, Olsen fulfills the claimed limitation that the first control means are formed of a plurality of touch sensitive sensors.

13. Applicant argues in essence with respect to claim 1 and similar claims that:

"None of the embodiments of Olsen discloses the combined features of claim 1, which mentions on the one hand the outer element covers the display means or forms an outer

portion of these display means, and on the other hand the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element.”

This is not found persuasive because of the following reasons:

- The Examiner interprets “the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element” as the sensitive pads of the touch sensitive sensors having at least partial contact with the outer element. In column 6, lines 35-67 and column 7, lines 1-25, it is stated “the programmable computer housing 90 contains the programmable computer components (e.g., the programmable computer 86)...the programmable computer 86 has a display 104...the computer mouse housing 88 has a saddle 92 for coupling the programmable computer 86 to the computer mouse 84...the programmable computer housing 90 makes *physical* contact with the computer mouse housing 88.” See also figures 6 and 7. Therefore, Olsen teaches that the outer element (i.e., the programmable computer housing 90) covers the display means (i.e., display 104) or forms an outer portion (i.e., the programmable computer housing 90 of figure 7) of these display means (i.e., display 104), and the sensitive pads of the touch sensitive sensors (i.e., motion sensor 104) are supported at least partially by the outer element (i.e., the programmable computer housing 90). Please see figures 6-7 for further details. As applied to the present application, Olsen fulfills the claimed limitation that the outer element covers the display means or forms an outer portion of these display means, and the sensitive pads of the touch sensitive sensors are supported at least partially by the outer element.

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*Conclusion*

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 395-3900.



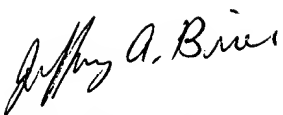
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jcw

March 14, 2003

  
JEFFERY BRIER  
PRIMARY EXAMINER